

Amendments to the Claims:

1 - 27. (canceled)

28. (currently amended) A casting procedure, ~~particularly for engine cylinder heads,~~ comprising steps of:

providing ~~for~~ a mold having open feeding risers on a top of the mold for ~~feeding~~ holding extra molten metal and feeding molten metal into the mold as the ~~cooled~~ metal shrinks and for attracting any slag, fumes and gases contained in the molten metal;

forcing molten metal to flow into the mold and said risers from a furnace situated below said mold by exerting a pressure on the surface of said molten metal in the furnace; and

sealing the top of the mold, ~~at least at the level of the open risers,~~ using a plate which prevents the molten metal introduced under pressure from overflowing and which is connected to a vacuum device for removing fumes and gases.

29. (currently amended) A casting procedure in accordance with claim 28, in which ~~the~~ expulsion of the casting from the mold takes place below it.

30. (currently amended) A casting procedure in accordance claim 29, in which at least ~~the~~ an upper part of the ~~figure~~ shape of the casting is obtained using cores.

31. (currently amended) A casting procedure in accordance with claim 29, in which at least ~~the~~ an upper part of the ~~figure~~ shape of the casting is obtained using a metal cope.

32. (currently amended) A casting machine ~~for receiving a mold as recited in claim 28, where~~ in combination with a mold, wherein

the mold comprises a bottom and an upper part obtained through cores or a metal male mold component, said mold at said bottom having inlets for coupling to pipes from a furnace underneath the mold and for containing molten metal and feeding risers in said cores or in said metal male mold component, said risers being on top of the mold, for feeding molten metal into the mold as the cooled metal shrinks and for attracting any slag, fumes and gases contained in the molten metal and the mold is equipped with a bottom and an ejector plate extending downwards from said bottom, and

the casting machine ~~comprising~~ comprises a lower main structure suitable for housing ~~a holding or maintenance~~ said furnace for feeding the mold, an upper main structure resting on said lower structure, a base plate resting on the upper main structure, a cooled plate positioned on the base plate and suitable for receiving the bottom of the mold, and ~~further comprising~~, underneath the cooled plate, a plate holder to be fastened to the ejector plate of the mold and running vertically between an inactive lowered position and a raised casting expulsion position.

33. (previously presented) A casting machine according to claim 32, wherein the cooled plate is fitted with an opening for passage of the ejector plate.

34. (previously presented) A casting machine according to claim 33, comprising quick lock means for fastening together the ejector plate of the mold and the plate holder of the casting machine.

35. (currently amended) A casting machine according to claim 34, in which the mold ejector plate has a pair of ~~mushrooms~~ headed studs and in which the plate holder of the machine is provided with a slide which runs along the plate holder and has slots adapted to receive the ~~mushrooms~~ headed studs and to lock them in place following ~~the~~ movement of the slide controlled by a hydraulic cylinder.

36. (currently amended) A casting machine according to claim 32,~~especially for engine cylinders heads, destined~~ designed to receive a mold with two sides, comprising two sides carriers which are fixed to the corresponding side of the mold and slide along guide columns and sliding gibs fitted to the machine for a movement of the slides by hydraulic cylinders.

37. (previously presented) A casting machine according to claim 36, in which the sides are fastened to the sides carriers by automatic quick locking devices.

38. (currently amended) A casting machine according to claim 37, in which every sides carriers has a slide with slots to receive a pair of ~~mushrooms~~ headed studs which protrude from the side of the mold and lock them in place following the movement of the slide controlled by a hydraulic cylinder.

39. (currently amended) A casting machine according to claim 38, in which the sides carriers are hinged to the sides of the machine, making it possible to rotate ~~them~~ them upwards by means of oscillating hydraulic cylinders fitted to the machine to enable easy cleaning and repainting of ~~the figure~~ parts of the sides of the molds.

40. (previously presented) A casting machine according to claim 36, in which at least one side of the mold is made in at least two overlapping parts and in which the related side carrier is made up of at least two corresponding parts, each of which is moved by a hydraulic cylinder, said hydraulic cylinder being controllable independently or in parallel.

41. (currently amended) A casting machine,~~especially for engine cylinder heads,~~ ~~said machine~~ having a top portion with a tilting arm hinged to the top portion, for moving a metal male mold component for low-pressure casting or a casting according

to claim 28, and/or for moving sealing means for the upper part of a mold positioned on the machine, depending on the casting process used.

42. (previously presented) A casting machine according to claim 41, in which the metal male mold component and/or the sealing means of the upper part of the mold are attached to a hydraulic cylinder carried by the tilting arm for their vertical movement.

43. (currently amended) A casting machine according to claim 41, in which, during the casting process, the tilting arm is closed on the ~~bench~~ machine and locked ~~to the latter from the opposite side compared with the hinged side~~ by a locking device, such as a jack.

44. (previously presented) A casting machine according to claim 32, wherein the main lower structure is removable from the upper structure for placing said upper structure on a carrousel or on the ground for a gravity casting procedure.

45. (currently amended) A mold for obtaining castings, ~~especially engine cylinders heads,~~ comprising a bottom and an upper part obtained through cores or a metal male mold component, said mold at said bottom having inlets for coupling to pipes from a furnace underneath the mold and for containing the molten metal and feeding risers in said cores or in said metal male mold component, said risers being on top of the mold, for feeding molten metal into the mold as the cooled metal shrinks and for attracting any slag, fumes and gases contained in the molten metal.

46. (currently amended) A mold according to claim 45, in which the upper part of the ~~figure~~ casting is obtained by cores, comprising a plate destined to be pressed, during the casting phase, onto the upper surface of the mold to prevent the molten metal from overflowing through the risers.

47. (currently amended) A mold according to claim 46, in which the plate is crossed by channels for ~~the~~ vacuuming of fumes and gases from the mold and is fastened to a support in which there is a vacuum chamber communicating with an external vacuum device, said plate's vacuum channels being provided with filters to prevent the passage of molten metal.

48. (currently amended) A mold according to claim 45, in which the upper part of the ~~figure~~ casting is obtained by the metal male mold component and in which the male mold component is fastened to a plate destined to be pressed, during the casting phase, onto the upper surface of the mold to prevent the molten metal from overflowing through the risers.

49 - 50. (canceled)